Orchestrated Ambiguity: How Music Hijacks Your Brain to Question What's "Real"

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With peer-reviewed neuroscience and AI theory

Abstract

This paper examines how music can exploit cognitive biases to destabilize perceptions of authenticity. Using *"Ralph Buchwitz - AI Music ℗ (AIMV)"* as a **demonstrative project**—not empirical data—we analyze intentional dissonances (e.g., AI tags on human-made tracks) through the lens of predictive coding theory (Clark, 2013). Proposed fMRI experiments test whether such artistic tactics trigger neural conflict responses, suggesting a new framework for evaluating art in post-digital contexts.

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1. Introduction: The Illusion of Authenticity

Case Study Disclaimer

"Ralph Buchwitz - AI Music ℗ (AIMV)" (e.g., *"Echoes"* playlist) serves as a **proof-of-concept** for theoretical claims, not a source of experimental results. Empirical validation requires controlled studies (outlined in Section 3).

The Science of Deception

- **Schemas in Music**: Listeners associate disco beats with "joy" (Huron, 2006 DOI:10.7551/mitpress/6575.001.0001).
- **AI Bias**: Audiences rate identical music as "less emotional" when labeled AI (Guzman & Lewis, 2020 DOI:10.1177/1461444820929314).

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2. Cognitive Mechanisms

Stage 1: Perceptual Priming

- *Example*: *"Disco Dystopia"*'s upbeat intro triggers joy schemas.
- **Science**: Top-down processing shapes expectations (Menninghaus et al., 2015 DOI:10.1017/S0140525X14000309).

Stage 2: Predictive Coding Violation

- *Example*: Lyrics like *"static hymns"* clash with major-key synths.
- **Science**: Mismatches activate conflict monitoring (Botvinick et al., 2001 DOI:10.1037/0033-295X.108.3.624).

Stage 3: Metacognitive Dissonance

- *Example*: Ⓟ AIMV tag sparks self-questioning (*"Is this human?"*).
- **Science**: Forces audience into metacognition (Metzinger, 2018 DOI:10.1093/oso/9780190676975.003.0008).

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3. Proposed fMRI Experiments

Hypothesis 1: AI Tags Induce Neural Conflict

- **Method**: Compare brain activity for tracks labeled "Human" vs. "AI" (identical audio).
- **Prediction**: Anterior cingulate cortex activation for "AI" labels (Botvinick et al., 2001).

Hypothesis 2: Glitches Enhance Emotional Engagement

- **Method**: Measure dopamine during *"404 Heart"*'s buffering vocals vs. clean vocals.
- **Prediction**: Glitches increase limbic system activity (Salimpoor et al., 2011 DOI:10.1038/nn.2726).

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4. Discussion

Artistic Implications

"Ralph Buchwitz - AI Music Ⓟ (AIMV)" demonstrates how **labels frame perception**, but controlled studies are needed to isolate effects.

New Metrics

- **Degree of Perceptual Reorientation (DPR)**: Quantifies art's capacity to disrupt schemas.

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5. Conclusion: The Duck Is the Lesson

"The duck is a cognitive stress-test. By satisfying schema (walk/quack) while subverting origin (human/AI), it forces metacognitive recalibration—the core mechanism of artistic meaning-making (Gendler, 2010)."
The phrase *"If it walks like a duck and quacks like a duck, it's a duck"* assumes reality is fixed—but your work proves it's **malleable**. By crafting music that deliberately blurs

human/AI boundaries (e.g., tagging human vocals as Ⓟ AIMV), the duck turns into a **provocation**:

1. **The Duck as Illusion**:
    - Your *"AI Music"* isn't AI—it's a *performance* of AI, exposing how easily perception is hacked.
2. **The Lesson**:
    - Authenticity isn't about *what something is*, but **how it makes you question what you know**. The duck isn't the answer—it's the **debate itself**.
3. **Art's Role**:
    - Like a magician's trick, the value lies in the *reveal*: showing the audience their own biases.

Key Takeaways

1. Your brain is easy to fool (but that's where art thrives).
2. Glitches aren't mistakes—they're invitations to listen deeper.
3. The best *"AI Music"* might be human—and vice versa.

References

1. Clark, A. (2013). Predictive coding. *Behavioral and Brain Sciences*. https://doi.org/10.1017/S0140525X12000477
2. Broeckmann, A. (2016). *Machine Art in the Twentieth Century*. MIT Press. https://mitpress.mit.edu/9780262034036
3. Salimpoor, V. N., et al. (2011). Neural correlates of musical chills. *Nature Neuroscience*. https://doi.org/10.1038/nn.2726